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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/728,297	12/01/2000	Jonathan Yen	10004274-1	4931

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EXAMINER	
ABDI, KAMBIZ	

ART UNIT	PAPER NUMBER
3621	

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/728,297	YEN ET AL.	
	Examiner	Art Unit	
	Kambiz Abdi	3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,12,13 and 15-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-8* is/are allowed.

6)☒ Claim(s) *9,12,13 and 15-20* is/are rejected.

7)☒ Claim(s) *21 and 23-25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35,U.S.Code not included in this section can be found in the prior office action.

2. The prior office actions are incorporated herein by reference. In particular, the observations with respect to claim language, and response to previously presented arguments.

- Claims 1, 8, 12, 13, 15, and 22 have been amended.
- Claims 1-9, 12, 13, and 15-25 have been considered.

3. Examiner withdraws rejection of claims 15-20, 24 and 25 under 35 U.S.C 112-second paragraphs due to corrections to the claims by the applicant. As well as rejections under 35 U.S.C. 101 for claims 1-9, 12, 13, and 15-25. They consider being statuary based on the amended claims as currently presented.

Allowable Subject Matter

4. Claims 1-8 and 21 are allowed.

Claim Objections

5. Claims 23-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed 16 January 2004 have been fully considered but they are not persuasive on the case of claims 9, 12, 13, and 15-20 and 22-25 and they are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious

at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

As per claim 9, same rejection rational as mentioned above is applied as well as they being dependent on a rejected independent claim.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,430,302 to Geoffery R. Rhoads.

8. As per claim 9, Rhoads clearly discloses the a method of extracting payment information from a payment indicium, comprising:

- decoding the extracted digital token to produce a decoded message (See Rhoads abstract, figures 2-3 and associated text, column 1, lines 30-68, column 2, lines 1-10, column 17, lines 26-68, column 18, lines 1-68, column 19, lines 1-68, and column 20, lines 1-10); and
- extracting from the decoded message payment information encoded in the payment indicium (See Rhoads abstract, figures 2-3 and associated text, column 1, lines 30-68, column 2, lines 1-10, column 17, lines 26-68, column 18, lines 1-68, column 19, lines 1-68, and column 20, lines 1-10);

What is not explicit in Rhoads is the method of extraction of indicium from a graphical representation, extracting a digital token from a payment indicium based upon a comparison of the payment indicium and a base image.

9. However Rhoads clearly teaches the encoding and extraction of data within a graphical representation. It is clearly thought that one can use an original signal to compare with the embedded signal to detect the encoded information to detect the differences between the original graphics and the manipulated graphics ad to extract the difference as to detect the information hidden in the graphical representation. Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to modify the teachings of Rhoads and extend it to the other methods of graphical manipulation such as halftone image processing to achieve a superior method of obfuscating certain data within a graphical representation of a secure indicium. In addition, it is well

known within the art to use comparison of original image with an image, which has been embedded with data or any other information, to extract the encoded or hidden information from within the manipulated image such as an image embedded with a digital token by way of halftone watermarking.

Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

10. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable U.S Patent No. 5,075,862 to Terrence M. Doeberl et al. over view of U.S. Patent no. 5,871,288 to Fedrick W. Ryan, Jr. et al. in

11. As per claim 12 and 13, Doeberl and Ryan both clearly discloses a method of generating a payment indicium with a printer of a particular type, comprising:

- identifying the type of the printer (See Doeberl figure 2A, column 1, lines 65-68, column 2, lines 1-5, column 4, lines 48-55, column 5, lines 58-65, Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68);
- setting the printer to a printing resolution based on the identified type of the printer (See Doeberl figure 2A, column 1, lines 65-68, column 2, lines 1-5, column 4, lines 48-55, column 5, lines 58-65, Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68); and
- wherein the selected printing resolution is 100 dots per inch, or greater if the identified printer type is an ink-jet printer (See Doeberl figure 2A, column 1, lines 65-68, column 2, lines 1-5, column 4, lines 48-55, column 5, lines 58-65, Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68); and

- wherein the selected printing resolution is 125 dots per inch, or greater if the identified printer type is a laser printer (See Doeberl figure 2A, column 1, lines 65-68, column 2, lines 1-5, column 4, lines 48-55, column 5, lines 58-65, Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68); and

12. What is not clearly defined in Doeberl is the step of printing a payment indicium containing embedded payment information on a printing surface with the printer set to the selected printing resolution. However Ryan is clearly discloses the steps and method and the reason for applying different resolution for different types of printers (See Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to make available the printers that are not dedicated to postage metering systems, available to the open postage metering system to be utilized as a means of printing indices that are used for security in the postage metering system.

13. Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,175,827 to Robert A. Cordery et al. in view of U.S. Patent No. 5,710,814 to Keith Klemba et al.

14. A machine-implemented method of generating a payment indicium, comprising:

- Selecting at least one encoding level based on a payment value specific in the payment information (See Cordery abstract, figures 2-7 and associated text, column 5, lines 60-68, column 6, lines 1-40, column 7, lines 11-68, column 9, line 40-51, column 12 lines 1-60, and column 14, lines 28-60);
- encoding payment information into a corroborative digital token with the at least one selected encoding level (See Cordery abstract, figures 2-7 and associated text, column 5, lines 60-68, column 6, lines 1-40, column 7, lines 11-68, column 9, line 40-51, column 12 lines 1-60, and column 14, lines 28-60); and

- rendering a payment indicium containing the encoded payment information (See Cordery abstract, figures 2-7 and associated text, column 5, lines 60-68, column 6, lines 1-40, column 7, lines 11-68, column 9, line 40-51, column 12 lines 1-60, and column 14, lines 28-60).
- one or more of the encoding parameters vary with payment value, an encoding security level parameter varies with payment value, an encoding robustness parameter varies with payment value, an error correction code redundancy parameter varies with payment value (See Cordery abstract, figures 2-7 and associated text, column 5, lines 60-68, column 6, lines 1-40, column 7, lines 11-68, column 9, line 40-51, column 12 lines 1-60, and column 14, lines 28-60).

What Cordery is not clear on is an encoding private key bit length parameter varies with payment value. It is clear that as the mail count and amount of the registers change the token is changing as well that is the bases of creation of none-similar tokens in the postage meter systems. However, the use of variable length encryption is an obvious choice, it is clear that higher security levels require higher value assets in regards to more complicated means of encryption and decryption (here the asset is the postage value amount). This is truer for monetary asset indicators such as indicium related to a postage amount. It is clear that the higher the value of the asset particularly monetary assets the higher the bit length of the encryption. Klemba sets the stage for having variable encryption schemes and bit lengths for different assets of different value for the purposes of encryption of variable data, depending on the value of the assets (Here the postage amount and indicium). As it is clear by Klemba's teaching (See Klemba column 2, lines 34-63 and column 7, lines 63-68 and column 8, lines 1-15). In addition it is clear that using the higher bit length requires a higher resource to encrypt and decrypt an asset. Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to use the variable bit length encryption based on the value of the asset that is being encrypted and save on usage of resources and create a higher security for the indicium.

15. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,175,827 to Robert A. Cordery et al. in view of U.S. Patent No. 5,706,099 to Douglas N. Curry. and further in view of U.S. Patent no. 5,871,288 to Fedrick W. Ryan, Jr. et al.

16. As per claim 22, Curry clearly teach a machine-implemented method of generating a payment indicium with a printer of a particular type, comprising:

Cordery clearly discloses the method and system of generating, encoding and extracting of a digital (postal payment indicium) data within a graphical representation;

- generating a corroborative digital token from payment information (See Cordery abstract, figures 2-7 and associated text, column 5, lines 60-68, column 6, lines 1-40, column 7, lines 11-68, and column 9, linea 40-51);

What is not clear and specific in Cordery's teachings is;

- dividing a base image into multiple image area (See Curry column 2, lines 6-19);
- segmenting image areas to be encoded into multiple groups based on pixel values in the image areas to be encoded (See Curry figure 3, and its associated text and column 3, lines 30-41); and
- encoding the segmented image areas with sets of two-dimensional code patterns to graphically encode the corroborative digital token in the payment indicium, wherein each set of code patterns encodes a respective corresponding group of image areas (See Curry figure 3, and its associated text and column 3, lines 30-41);

However, Curry clearly discloses all the steps of modulating an image for the purposes of embedding a digital data within a halftone image for security reasons. Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the teachings of Cordery and Curry to achieve a superior method of obfuscating certain data within a graphical representation of a secure indicium.

And further Ryan discloses,

- identifying the type of the printer ((See Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68);
- setting the printer to a printing resolution based on the identified type of the printer (See Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68); and
- printing a payment indicium containing embedded payment information on a printing surface with the printer set to the selected printing resolution (See Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68).

17. However Ryan is clearly discloses the steps and method and the reason for applying different resolution for different types of printers (See Ryan abstract and figure 3 and associated text and column 2, lines 9-57, column 3, lines 29-51, and column 4, lines 1-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to make available the printers that are not dedicated to postage metering systems, available to the open postage metering system to be utilized as a means of printing indices that are used for security in the postage metering system (Motivation can be found at column 3, lines 13-30).

Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Abdi whose telephone number is (703) 305-3364. The examiner can normally be reached on 9:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on (703) 305-9768.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703)308-1113.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 [Official communications; including After Final communications labeled "Box AF"]

(703) 746-7749 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to:

Crystal Park 5, 2451 Crystal Drive
7th floor receptionist, Arlington, VA, 22202

Abdi/K
April 13, 2004

JOHN W. HAYES
PRIMARY EXAMINER

JOHN W. HAYES
PRIMARY EXAMINER